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10/092,026	03/06/2002	Armin Holle	B0004/7091	7602

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EXAMINER

NGUYEN, KIET TUAN

ART UNIT PAPER NUMBER

2881

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,026

Applicant(s)

Holle et al.

Examiner

E. NEWEN

Group Art Unit

2881

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-14 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-14 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☒ All ☐ Some* ☐ None of the:
 - ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 7
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

Objected Informalities

The disclosure is objected to because of the following informalities:

In The Claims

Claim 4, line 1, "claims" should be -- claim --.

Appropriate correction is required.

Objected Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the movement system as recited in claim 1; and the signal processing apparatus as recited in claim 9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Rejection Under 35 U.S.C. 112, Second Paragraph

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the ion focusing and imaging system" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Rejection Under 35 U.S.C. 102(b)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 9 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by

Ando, Shimadzu Corp. (2000-057992).

Ando discloses, figs. 1-2, a time of flight mass spectrometer apparatus. The apparatus includes a moving sample stage 112 for carrying two sample plates having a different samples thereon; a laser source 121 for producing a laser beam; a beam splitter 122 for splitting the laser beam into two laser beams La and Lb which are focused to irradiate the two sample plates; a focused lens 115 for focusing generated ions of the different samples to an ion detector 113; and a control data processing section 14.

Rejection Under 35 U.S.C. 103(a)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 7-8, 10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando, Shimadzu Corp. (2000-057992).

Ando (2000-057992) discloses all the features as discussed above except the focus pattern having 4, 7, 9, 16, 25 or 36 focal points as recited in claim 2; the separating detector for detecting the ions from each sample as recited in claims 7 and 13; a common multi-channel plate multiplier with a number of spatially separated anodes as recited in claim 8; the spectra from the samples summed together as recited in claim 10; and a moving deflection system for deflecting the laser beam as recited in claim 14.

Applying the 4, 7, 9, 16, 25 or 36 laser beams to the sample is considered to be obvious variation in design, since applying the 4, 7, 9, 16, 25 or 36 laser beams to the sample is duplication of part, thus would have been obvious to one skilled in the art to apply the 4, 7, 9, 16, 25 or 36 laser beams to the sample in the Ando apparatus for separately ionizing the samples, as Ando discloses using the two laser beams for ionizing the two samples.

Using each detector for separately detecting the ions from each sample is considered to be obvious variation in design, since the ion detector is well known in the art and in the mass spectrometer apparatus for detecting ions emitted from the sample, thus would have been obvious to one skilled in the art to use the plurality of ion detectors for separately detecting ions from

separated samples in the Ando apparatus for separately generating mass spectra for ions of each sample.

Using the ion detector having the common multi-channel plate multiplier with a number of spatially separated anodes is considered to be obvious variation in design, since the ion detector having the common multi-channel plate multiplier with a number of spatially separated anodes is well known in the art and in the mass spectrometer apparatus for detecting ions, thus would have been obvious to one skilled in the art to use the ion detector having the common multi-channel plate multiplier with a number of spatially separated anodes in the Ando apparatus for detecting ions.

Summing the spectra from the samples is considered to be obvious variation in design, since summing the spectra from the samples is well known in the art and in the mass spectrometer apparatus for analyzing the samples, thus would have been obvious to one skilled in the art to sum the spectra from the samples in the Ando apparatus for analyzing the ions of each sample.

Using the moving deflection system for deflecting the laser beam is considered to be obvious variation in design, since the moving deflection system for deflecting the laser beam is well known in the art and in the mass spectrometer apparatus for scanning the laser beam on the sample, thus would have been obvious to one skilled in the art to use the moving deflection system in the Ando apparatus for scanning the laser beam on the sample.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Yamamoto et al. disclose a time of flight mass spectrometer having focus and deflection lenses for a laser beam; and

2) Caprioli disclose MALDI MS having optical lenses for a laser beam and means for mapping images of samples.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner *Kiet T. Nguyen* whose telephone number is (703) 308-4855.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9318.

K.T.N/Primary
June 26, 2003



KIET T. NGUYEN
PRIMARY EXAMINER